

Artists Using Science and Technology

Ylem (Eye-lum): The exploding mass out of which the universe emerged in the Big Bang

Ylem Newsletter

Vol. 13, No. 11 November 1993



Globular Cluster, painting by Beth Avary (see article and Forum announcement on page 3).

Koos Verhoeff: Mathematician, Artist

Born in Holland in 1927, Koos Verhoeff approaches his artistic design work with a background in mathematics and computer science. After studying at the Universities of Leiden and Amsterdam, Koos went on to work at the mathematical center in Amsterdam and the Delft University of Technology. During that time the Dutch artist M.C. Escher frequented the Mathematical Center to research many of the mathematical principles he applied to his work.

Inspired by Escher, Koos became interested in the great potential for mathematical applications to artwork. In 1971 he accepted a professorship in computer science at the Erasmus University in Rotterdam, where he gained a reputation for promoting the use of the computer as a tool for teaching, recreation, and art. Koos used the computer to solve computational design problems in the collaborative work he did with another Dutch artist, Popke Bakker.

After his retirement from the university in 1988, Koos began devoting his time to

the discovery and development of artistic structures based on geometric principles, such as lattice configurations and fractal formations. He has described himself as more of an explorer and a discoverer than a designer.

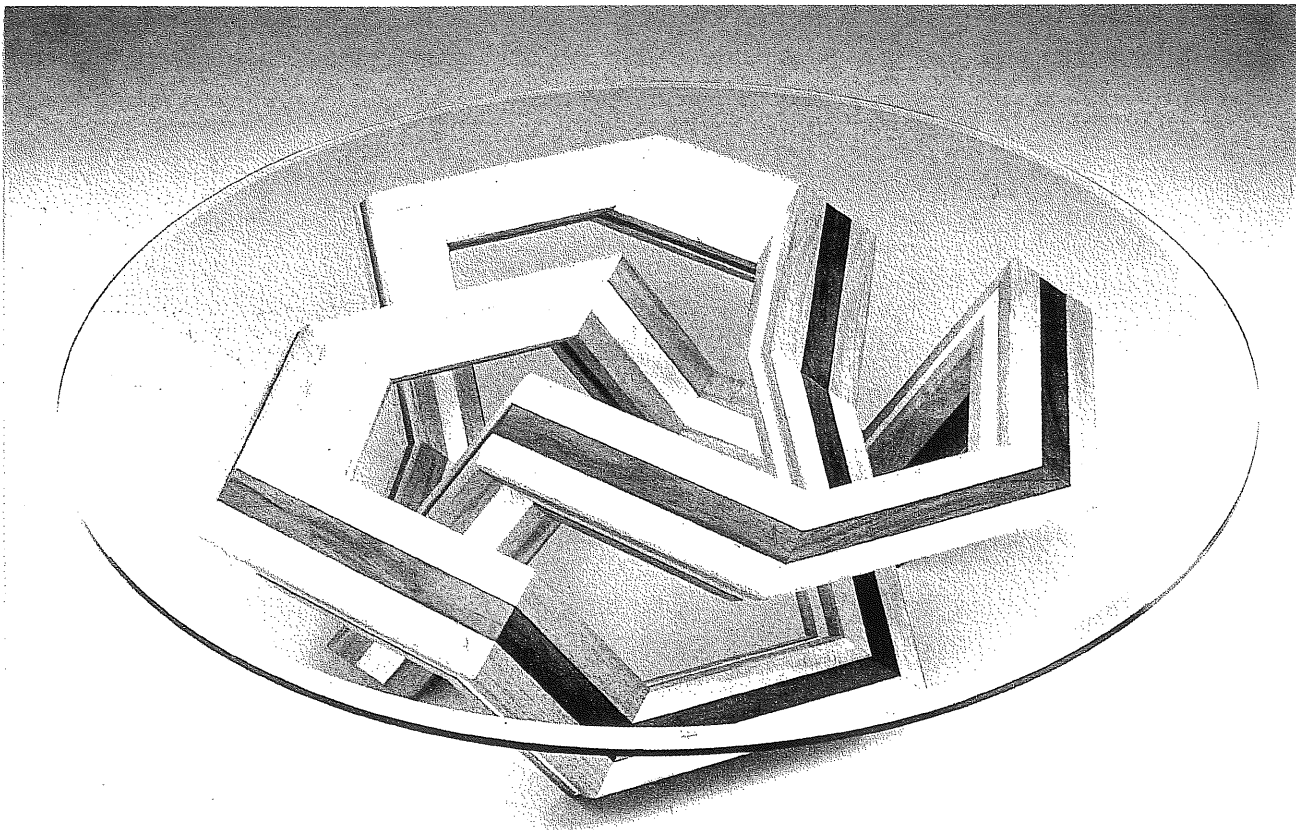
He wonders and wanders about the abstract world of mathematical structures, looking for forms with intriguing mathematical properties as well as aesthetic appeal. In 1991, Anton Bakker, an engineer in the U.S. (now residing in Paris, France), and Kevin Gallup, a ceramics sculptor and metal worker, began rendering many of Koos' designs in bronze and aluminum. In 1992 they showed their work at an art and mathematics conference in New York. There, they met wood craftsman and furniture maker Jane Greenburg, a former mathematics student who was fascinated by the exhibit and has since been executing work in wood based on Koos' designs.

This description of Verhoeff's work was taken from a catalog showing his works. For more information, write Studio 26 d'Art Center, 125 College Place, Norfolk, VA 23503 USA; tel. 804-625-6244, or Keersop 24, 5551 TG Valkenswaard, Holland; tel. 0-4902-14765. Shown here: Verhoeff's *Trefoil Knot Coffee Table* in laminated wood.

News of Members

The Canadian Space Agency recently bestowed on **Paul Hartal**, founder of the Centre for Art, Science and Technology in Montréal, a tribute for "contributing your talent to the cultural evolution of mankind and the preservation of the planet." Hartal wrote the forward to a book just published in India titled *Communication and Rural Development*, and has been involved in the development of Japan's space-age Intercommunication Center, a museum opening in 1996 in Tokyo. He is currently exhibiting in the U.S., France and Korea ... **Walter Alter** is a system operator of the Activist BBS (electronic bulletin board service), specializing in political conspiracies. Contact him at 510-532-6248: Files on CIA, KGB, FBI, JFK, RFK, MLK, NSA, ADL, M15, etc.... **Ed Severinghaus'** BodySynth™ was demonstrated at the grand opening of the Yerba Buena Center in San Francisco in October. It transforms

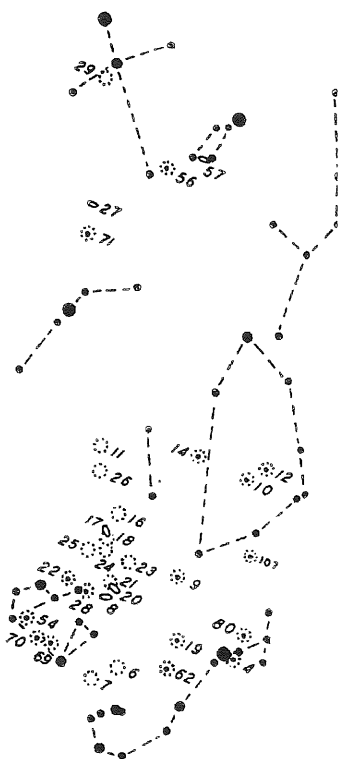
Continued on page 7



Ylem Forum: Cosmos and Computers

Wednesday, November 3, 7:30 pm

McBean Theatre, The Exploratorium, 3601 Lyon St.,
San Francisco Contact: Beth Avary, 415-851-3125



Stars and Messier Objects (nebulae, clusters and galaxies)

Two artists whose work is cosmic and visionary demonstrate and explain their work using computer graphics and animation.

Joel Hagen: "An Artist Explores Mars with an Amiga." Hagen combines art with his interests in paleontology, astronomy and space science. His Amiga animation received grand prize in the first BADGE animation competition, and in 1989 he won first prize for his Amiga animation program, *The Director*. He writes a regular column on the use of personal computers in the arts in *Amigaworld*. He is a founding member of the International Association for the Astronomical Arts, and co-founder of CONTACT, an annual interdisciplinary creative symposium regarding human futures in space.

Garret Moore: "Creativity and the Digital Frontier." Moore is an illustrator who has done works for books by Isaac Asimov and for the future space program at NASA. He infuses his work with visionary qualities, saying, "If we were truly made in God's image (Creators), we should also create with the same responsible love and sacredness of the Great Spirit." He has done computer illustration as well as paintings for several years now, and is now moving to 3D animation, video and interactive technologies. He recently co-produced a computer-animated video for 15,000 people attending a benefit performance for Missing and Abused Children featuring the Las Vegas Symphony and vocalist Jon Anderson.

The program is open to the public free of charge. Handicap accessible.

Some Thoughts About Space Art

by Beth Avary

Beth Avary, whose work appears on the cover, is Chair of the Ylem Forum on November 3. She has curated and arranged a large exhibit of space art for the International Association of Astronomical Artists that is now touring U.S. Science Museums.

My interest in Space art followed a love of astronomy. For me, the beginning of Everything with the expansion of space and time is, if not the most fascinating subject around, at least the most fundamentally awe-inspiring.

As an artist, one of my main concerns is to translate this fascination and feeling of awe into my work so that I can communicate it to others. Another concern, as an artist interested in science, is to show scientifically feasible spacescapes that couldn't be seen by taking a picture with a camera, or in any other way.

At first, I was more intrigued by the symbolic representation of the cosmic element than in portraying scientific realism. I still find this type of painting interesting and important, but I now also like to attempt realism. I say attempt because I don't believe anyone ever gets it quite right. One reason for this is that, no matter how technically skilled the artist is, the material we work from falls short of showing how things *really* look. Most of the photos have been computer enhanced or exposed for extra long amounts of time, for instance.

Another reason is that because of the vast amounts of space involved, it is hard to be literal and at the same time compose an interesting painting. This is the reason I called my work in this area *Astrosurrealism* for awhile. Using Bell's¹ definition of surrealism, I purposefully cut out vast chunks of space so as to bring elements closer together in order to enhance the overall composition.

It has been interesting to note how many other subjects follow a love of astronomy; cosmology, geology, physics and space exploration. Of these, I think space exploration plays a special role because it may hold the key to humanity's future.

My fascination with the various types of space art will probably never end. The beauty is intense, the layers of depth and meaning seemingly never ending, and the momentum is forward-looking and filled with hope.

¹ According to Michael S. Bell (who has done extensive research on Surrealism), there are three main families of contemporary (Veristic) Surrealist style: Classical Surrealism, Social Surrealism and Visionary Surrealism. He says, "What sets Surrealism apart from the other two major forms of art (Decorative and Abstract) is that whenever two or more wholly different aspects of time or space are placed in the same image, and when this is accomplished by means of naturalistic rendering, and when the classical traditions of perspective and composition are observed, then the only possible result is Surrealism."

YLEM

CALENDAR

Events

November 3-7

Fourth International Symposium on Electronic Art (FISEA) (Minneapolis)

Sound/Perfor: Wed-Thu-Sat Eve, Nov. 3,4,6 Projects & Applications (Poster Sessions), Sun. Nov. 7. Theme: The Art Factor. Humans and their "sensing/knowing" experience mingles with machines. The intention is to promote a greater understanding of both the formal aspects of the work and its technology. FISEA 93; Minneapolis College of Art & Design 2501 Stevens Av S, Minneapolis, MN 55404-4343; 612-874-3754; Fax: -3732; fisea93@mcad.edu

November 3, 6:30 pm

John Warnock: Adobe Acrobat (New York City)

New York Mac Users Group and NYC/ SIGGRAPH are having a joint meeting to hear the CEO of Adobe systems talk about Acrobat, Adobe's new inter-platform document exchange software. Free. Martin Luther King High School, 65th and Amsterdam Ave., New York City

November 3, 8 pm

Lecture by Dr. Jonathan Miller

Last in the lecture series, "Mindworks: thinking About Thinking" in conjunction with psychology exhibits at The Exploratorium next door. \$14. Held at: Palace of Fine Arts Theatre, 3601 Lyon St. (next to Exploratorium), San Francisco; Tickets: City Box Office, 141 Kearny St., San Francisco, CA 94108; 415-392-4400

November 3

Ylem Forum:

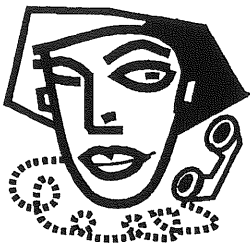
Artists, Computers and the Cosmos

Details on page 3. Note: parking will be tight, owing to a competing event in theatre next door. Come early.

November 4-6

American Center for Design (Chicago)

First National Conference on Multimedia for Designers, Harold Washington Library Center Auditorium, Chicago. Trade show and seminars on hardware, software, film, video, interactive media, designers' work, etc. American Center for Design, 233 E. Ontario St., #500, Chicago, IL 60611, 800-257-8657; 312-787-2018; Fax: 649-9518



November 4-7

Other Minds

At new Yerba Buena Center. Concert events by some of today's most exciting composers: Philip Glass, Jai Uttal's world-jazz band, the Pagan Love Orchestra, Conlon Nancarrow and Trimpin, and a special tribute to John Cage. They include demos and discussions with the audience. Also, informal social events where you can meet the composers. Center for the Arts Galleries, Yerba Buena Gardens, 701 Mission St., San Francisco, CA 94103

November 6-13

Multimediale 3 (Karlsruhe, Germany)

The Media Arts Festival of the Center for the Arts in Karlsruhe. Zentrum fur Kunst und Medientechnologie, Karlsruhe (ZKM), Postfach 6919, D-76049 Karlsruhe, Germany; tel. +0721/9340-0

November 8-15

ICP Symposia (New York)

Two symposia held Nov. 8 & 15 in conjunction with Iterations: The New Image (Exhibits, below), these panels will explore the electronic image and how it can communicate a range of experiences unimaginable in traditional media. Moderators: curators Timothy Druckrey and Charles Stainback. \$15. Space limited. ICP, 1130 5th Ave., New York, NY; 212-860-1776

November 12-14

Symposium on Small Computers in the Arts (Philadelphia)

Theme: "From Obscurity to Ubiquity: Personal Computing." Small Computers in the Arts Network (SCAN) has put on this intimate-scale artist-centered conference for 13 years now. Held at the Franklin Institute, a science museum in Philadelphia. Presenters include Ylem members Helaman Ferguson, Nancy Freeman and computer pioneer Lillian Schwartz. Not expensive! \$125, student \$60. SCAN, Dick Moberg, P.O. Box 401, Ambler, PA 19002, 215-283-0860

November 15, 7:30 pm

Making it in the Art Scene

Artist Alex Greenfeld will share his experience in getting recognition outside his local area. Ample time for discussion of individual situations. Admission: sliding scale, \$8-12. Register now: Space is limited. EBA School of Art, 689 Bryant St., San Francisco, CA 94107; 415-777-1474

All events and exhibits occur in the San Francisco Bay Area except where noted. Is your event or exhibit listed here? Send to Ylem Editor, 967 Moreno, Palo Alto, CA 94303; trudyymrrh@aol.com

November 20, 2 pm

Virtual Reality Check (Astoria, NY)

A tempered look at the reality of virtual reality from three pioneers: Myron Krueger, Tony Asch, and the staff of Ediel New York. New art work, new capabilities shown. "Call for reservations," but no phone given. American Museum of the Moving Image, Astoria, NY

December 1

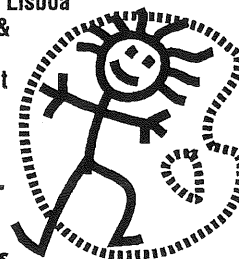
A Day Without Art

A day each year is devoted to the remembrance of people who are afflicted with, or have died of AIDS. Visual AIDS, 212-206-6758

December 6-10

Two Computer Conferences (Algarve, Portugal)

Edugraphics 93: First International Conference on Graphics Education, and Third International Conference on Computational Graphics and Visualization, held at Algrave, Portugal. Contact: Prof. Harold P. Santo, Dept. Civil Engineering, IST-Advanced Technical Institute, Technical University of Lisbon, Av. Rovisco Pais 1, 1096 Lisboa Codex, Portugal; tel & fax: 35-1-848-2425; d1663@beta.ist.utl.pt



Exhibits

November 2-19

Computer Art by Les Barta (Ventura, CA)

Each of the works by Barta, an Ylem member, reconstructs the images found in a single photograph, reconstructing them into an abstract composition. The New Media Gallery, Ventura College, Ventura, CA

Through November 6

Wynne Ragland Computer Works

Computer-generated works on paper and canvas invoking futuristic landscapes and still lifes that are reminiscent of traditional fine arts paintings and sculpture. Ylem member Mary Lou Boch of The Williams Gallery has promoted computer art as fine art since 1986. The Williams Gallery, 8 Chambers St., Princeton, NJ 08542; 609-921-1142

Through November 7

Digital Art by Will Tait

Reception Thursday September 9 / from 5:00 to 8:00 pm. Ylem member Will Tait is also organizing a panel discussion on digital art (see Events). Dow & Frosini Gallery, 2284 Fulton Street, Berkeley, CA; 510-841-4402; Will Tait, turtle@usenix.org

Through November 27

Techno Art

An exhibit of 2D computer-assisted images, interactive works and animation. A group show peppered with Ylem members: Victor Acevedo, Maggie Bollock, Diane Fenster, Helen Golden, Craig Harris, Eleanor Kent, Dorothy Krause, Therese Lahaie, Nance Paternoster, Kit Monroe Pravda, Karen Schminke, BodySynth™, Fran Valesco, and Nancy Worthington. Call ahead for hours. **Spectrum Gallery/Gallery Fuzee, 511 Harrison Street (near 1st St.), San Francisco; 415-495-1113**

November 30

Images from the Terrace: Calcutta

An exhibition of dyed and painted photographs by Ylem member Helen Golden. **Institute for Research on Women and Gender, Serra House, Stanford University, CA; 415-725-3622**



Through November 30

Visual Evidence—Exhibit C (New York City)

Group show of computer-based art. **New York Law School, 47 Worth St. (btwn. Church & W. Broadway), New York, NY; info: Art Initiatives, 212-406-4073**

Through November 30

Celebration of Two by Two (Portland, OR)

Collaboration artworks by Roberta Kirk and Daria created in Yachats, Oregon in 1992-3. November Computer Art Museum special focus: Daria of Abaci Gallery. **Abaci Gallery, 312 NW Tenth, Portland, OR 97209; 503-228-8642**

Through December 5

In Out of the Cold

Art, artifacts and military hardware from the Cold War. Includes computer art, kinetic sculpture and video. Gallery is located in Yerba Buena Gardens, a new art center next to Moscone Convention Center that just opened in October. Admission: \$3, children & seniors \$1. **Center for the Arts Galleries, Yerba Buena Gardens, 701 Mission St., San Francisco, CA 94103**

Through December 31

Ancient Myths, Legends and Future Dreams

Cosmic art show includes Ylem members Beth Avary, Wolfgang Gersch, and Myrrh, whose "earth from space" paintings are in the Briefing Room. Beth Avary is the producer for this month's Ylem Forum. **Visitor Center, NASA-Ames Research Center, Moffett Field, CA 94035**

Through January 2

Psychology

Understanding Ourselves, Understanding Each Other. 30 new hands-on exhibits and activities. Includes *Love Tape Booth*, an interactive project in which people make a short tape of their feelings about love, by artist and psychologist Wendy Clarke. And for the very young, *Playspace*, an area with blocks, water and sand toys, musical instruments and other activities to help parents observe child development in action. **McBean Theatre, The Exploratorium, 3601 Lyon St., San Francisco; 415-561-0376**

Through February 6

Iterations: The New Image (New York City)

Investigates the impact of the computer on our culture through electronic photography, digital video, graphics, animation, electronic sculpture, media installations and interactive environments. Over 70 works by an international selection of 16 artists. In their works, technology and content are on an equal footing. "One has the sense that this is the only form these particular works could take to achieve their intended meaning." **International Center of Photography Midtown, 1133 Ave. of the Americas, New York, NY; 212-768-4682**

Opportunities

Deadline November 1

AFI National Video Festival (Los Angeles)

The AFI Video Festival is one of the largest and most prestigious video exhibitions in the world. In this curated festival, programming changes from year to year and is organized around specific themes. Contact: Ken Wlaschin; Formats: 3/4"; Fee: \$25. **The American Film Institute, 2021 North Western Avenue, Los Angeles, CA 90027; 213-856-7707**

Icons on these pages by
Pamela Hobbs



Deadline November 1

L.A. Freewaves (Los Angeles)

For the 1994 festival, L.A. Freewaves will be included in the AFI Video Festival. L.A. Freewaves will have five exhibitions within the AFI festival, and there will be one traveling "Video at the Drive-in" exhibition and four cable shows. Contact: Ken Wlaschin at AFI or Anne Bray; Formats: 3/4"; Fees: \$25; Categories: Open. **L.A. Freewaves, c/o AFI Video Festival, 2021 North Western Avenue, Los Angeles, CA 90027; 213-856-7707 or 213-687-8583**

Deadline November 1

National Computer Art Invitational

\$1,000 purchase awards. Open to U.S. artists. All media created and/or generated on computers (hard copy only). Show opens in January. \$15/up to 10 slides; send with SASE. **Friends of the Gallery, Gallery of Art MS-102, Dept. of Art, Eastern Washington Univ., Cheney, WA 99004, 509-359-7070**

Deadline November 1

Poetry Film Festival

In its 18th year, the Poetry Film Festival is aimed at the general public. The winners are chosen by the film festival staff and the audience. Cash awards, a nation-wide tour and TV access venues are offered selected tapes. Works must incorporate a verbal poetic statement in narrated or captioned form. Contact: George Aguilar; Formats: VHS; Fees: \$10; Categories: Poetry films/videos with a verbal poetic statement in narrated or captioned form. **Fort Mason Cultural Center, Bldg. D, San Francisco, CA 94123; 415-776-6602**

November 3-7, noon, CST

FISEA Fax Open

The Exquisite Fax announces a fax art project in conjunction with the Fourth International Symposium on Electronic Art (FISEA 93). The theme of the project is The Fax Art Factor. Faxes received will be exhibited at FISEA 93 at the Minneapolis College of Art and Design in Minneapolis, Minnesota during the symposium. Supplementary text discussing the art factor of a visual fax may be sent but will not be exhibited. However, a record of such faxes will be maintained and made available to FISEA attendees at the site of the exhibition. Craig Ede (craige@pantry.mcad.edu) is curator of *The Exquisite Fax*. Please do not send faxes outside of the stated time boundaries. Both a plain paper fax and a roll fax will be available to accommodate faxes of standard and non-standard size. The plain paper fax number is **612-874-3797**. The roll paper machine fax number is **612-874-3748**

Deadline November 8

Thomas A. Edison Black Maria Festival (Jersey City, NJ)

The purpose of the Black Maria Festival is to advance the art of film, video and electronic-image making and to provide exhibition and support opportunities to independent, noncommercial motion picture producers. Contact: John Columbus; Formats: 1/2" and 3/4" video; film; Fees: \$25; Categories: open. **Thomas A. Edison Black Maria Film/Video Festival, c/o Jersey City State College, Media Arts Dept., 203 West Side Avenue, Jersey City, NJ 07305; 201-200-2043**

Deadline November 12
Input (Montréal)

The International Public Television Screening Conference is an annual forum for the exchange of program ideas among working professionals in public television. Contact: Terry Pound or Martha Durham; Formats: 3/4" NTSC; Fees: None; Categories: Any genre of work broadcast on Public TV. **U.S. Input Secretariat, South Carolina Educational TV, 1101 George Rogers Blvd., P.O. Box 11000, Columbia, SC 29211; 803-737-3434 or 737-8023**

Deadline December 1
Public Art, Boston, MA (Boston)

Permanent and temporary public art will be an "essential component" of the Central Artery/Tunnel Project as it rebuilds I-90 and I-93 in Boston. Artery Arts Programs, **Central Artery/Tunnel Project, One South Station, Boston, MA 02110; 617-951-6000; Fax -0897**

Deadline December 1
ISEA 94 Proposals Sought

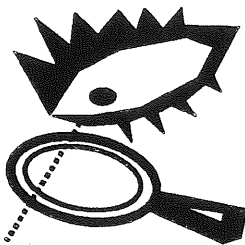
Workshops and courses, installations, performances, network and other projects for the Fifth International Symposium on Electronic Arts to be held in Helsinki, August 23-29, 1994. Themes: Spacescapes (including virtual landscapes); High & Low Tech; The Next Generation of Electronic Arts; Electronic Arts in Universities; Sound and Music; Games; East Meets West (links to Eastern Europe). Contact: **ISEA 94, Ms. Minna Tarkka, Univ. of Art and Design Helsinki UIAH/Media Lab, Hämeentie 135 C, 00560, Helsinki, Finland; tel. 358-0-7563601; Fax -3602**

Ylem Booth at AAAS

The American Association for the Advancement of Science (AAAS), with 55,000 members, is holding its annual convention in San Francisco in February, and Ylem will have a booth on the exhibit floor. Members are needed to invent easy-to-do exhibits within the severe limitations given us, as well as to construct, install and man the booth. Contact: **Trudy Myrrh Reagan, 967 Moreno Ave, Palo Alto, CA 94303; 415-856-9593; trudymyrrh@aol.com**

Ylem Newsletter Needs You!

This newsletter welcomes short articles (500-800 words) on subjects of concern to our readers. Artwork by Ylem artists, especially show-stopping black/white images in vertical format needed for the cover (submission guidelines on back cover). Members who live near Palo Alto can learn valuable desktop publishing and editing skills by volunteering for newsletter production. Contact: **Trudy Myrrh Reagan, 967 Moreno Ave, Palo Alto, CA 94303; 415-856-9593; trudymyrrh@aol.com**



Needs/Offerings

AIDS Project of the East Bay (APEB)

A new project in Alameda County, CA. It conducts a music, art and drama program in which HIV/AIDS prevention material are created for youth by youth. Local artists are invited to be advisors and mentors for the visual arts component of this program. Guidance is needed to find studio space, art materials, talented art students, exhibit space, and consultants during the creation process. Contact: **APEB, 565 16th St., Oakland, CA 94612; 510-834-8181**

Art Calendar 1993-4 Annual

Published by *Art Calendar*, the business magazine for artists, from which Ylem draws some of its Calendar items. 1,200 listings. We can't possibly list all of the items in the *Annual* of interest to our members! Includes alternative spaces, museums and university-level galleries, slide registries, agents, residencies, art consultants, organizations, corporate collections, and more. \$15. Get the next one free with your yearly subscription, \$32/yr. **Art Calendar, PO Box 199, Upper Fairmount, MD 21867; 1-800-597-5988**

Center for Visual Arts

Large slide registry purports to be a record of art-making in the San Francisco Bay Area for the last 20 years, but has almost no slides of high-tech art. Ylem artists, consider setting the record straight! Registry plans to create CD-ROMs, allowing images from its 40,000-slide archive to be sent by modem. Other member benefits, too. Membership fee: artists, \$40 with volunteer time or \$50 without; students, \$5 with volunteer time. **Center for Visual Arts, 713 Washington St., Oakland, CA 94607; 510-451-6300**

The Computer: A Tool for Sculptors

A 50-minute video showing and explaining the work of 42 sculptors presented at the 14th International Sculpture Conference, co-sponsored by Connecticut College Center for Arts and Technology. (See *Opportunities* regarding the next conference, to be held in San Francisco). VHS or PAL format. \$40, shipping \$5 in North America, \$15 elsewhere. Send orders to: **International Sculpture Center, 1050 17th St. N.W., Washington, DC 20036; 202-785-1144; Fax -0810**

The Geometry Center

FISEA attenders may want to visit this! National Science and Technology Research Center for Computation and Visualization of Geometric Structures. The three-fold mission of the Center is to support and promote: mathematics and computer science research; software, animation, and tool development and production; education and communication of mathematics at all levels. **The Geometry Center, University of Minnesota, 1300 S. 2nd St., Minneapolis, MN 55454; 612-626-0888; fax: 612-626-7131; admin@geom.umn.edu**

Errata

Computer Art: Start in a New Direction, a show in Germany listed in October *Ylem*, is an invitational show, not a competition. *Do not send for a prospectus*. Artists interested in being included in future projects curated by DARIA should send: slides (duplicates only), resumé and supporting materials. No art with material appropriated from another artist accepted. All slides will be put in a permanent slide registry. Send to: **DARIA, Abaci Gallery, 312 NW 10th Ave., Portland, OR 97209; 503-288-8642**



Icons on these pages
by Pamela Hobbs

Some calendar items reprinted from *Art Calendar* (the monthly marketing and career management journal for artists, PO Box 199, Upper Fairmount, MD 21867. Subscriptions \$32/yr.), *Rough Draft* (from the San Francisco Cacophony Society), *Video Networks* (from Bay Area Video Coalition), *V/O* (NY Chapter SIGGRAPH), *ISEA Newsletter* (International Symposium on Electronic Arts), *The Northwest Cyberartist*, *Northbay Multimedia Reporter*, *Artweek*, *Movements* (Art & Science Collaborations, Inc.), *L.A.S.E.R. News*, *Leonardo Newsletter* and *FineArts Forum e-mail*.

Money: The Most Realistic Thing in Cyberspace

book review by Trudy Myrrh Reagan

The Death of Money

by Joel Kurtzman

(New York: Simon & Schuster, 1993),
hardcover \$22.

Artists, if you're planning to populate cyberspace with fictions that grab the populace emotionally and change the world, I'll break your heart: the moneychangers got there first. Money is now a system, says Joel Kurtzman, just ephemeral digits sloshing around on a global network of computers, never resting (since it's always daylight somewhere, with trading going on).

The Analytical Unit is a new expert system that makes buy/sell decisions on a flood of transactions daily, in real time. Kurtzman says it also "generates intricate three-dimensional charts that refer to stock, bond, and exchange rate prices and give indications of what actions a trader should follow. To read these 3-D color charts, traders put on special glasses, like audiences wore at 3-D movies years ago, one of the more bizarre accoutrements of the information age." Doesn't your artist's heart feel a throb of joy? Financial analysis like this is available to traders worldwide, but at terrific cost. The wealthy monopolize the means to become terrifically wealthy.

It all began with Nixon's announcement on August 15, 1971 that the dollar would no longer be tied to the gold stored in Fort Knox, but would "float" against all other currencies. This opened up wonderful arbitrage possibilities, where one profits by simultaneously buying and selling the same currency or equity in different markets.

Then, electronic transfers of money and transactions became so easy. Small differences, if traded often enough could earn a hefty sum. Old products like stock options, took on new significance. New financial "products" were invented. You can even buy odds on what the S & P 500 will be—each transaction, of course, earning someone a commission. The market for such "products" is now 20 times bigger than the equities market for companies making real goods and services. Many analysts on Wall Street no longer go out



and visit companies but simply look at recent earnings. The earnings of productive companies, and those selling the family store (and seed corn to boot) often look alike. No matter. Also rated equally are rumor and hard fact, because information comes to analysts at such a rapid rate that the filtering, judging process has broken down. From time to time, the networks carry nothing but rumors and hysteria, as on October 19, 1987.

Unfortunately, this virtual fantasy affects each one of us. The system of ones and zeros that we depend on is a volatile system. As global interest rates gyrate, individual countries lose much of their power to control their economies by fixing interest rates. Factory CEOs are unable to make long-term plans, do research, reinvest with vision, so manufacturing jobs suffer. Speculators get very rich, while ordinary people, perhaps artists in particular, live closer to the edge. Moreover, the system is vulnerable to computer system crashes, and to sabotage (this puts the World

Trade Center bombing in a new light). Companies raise prices to cover greater risks. Hypermoney is poor place to store savings, but it's all we have.

Politicians believe in the "invisible hand" of the free market and clamor for fewer controls so that the system will right itself. But some systems naturally gyrate out of control. Other complex systems work brilliantly most of the time, but are avalanche-prone. This one is too new to know whether it is self-righting or not. The author recommends some reforms.

In the meantime, artists, get busy: an interactive project or computer game called *\$im* would be riveting!

Still from *The Idea*, a film by Bill Knowland. In this satire, "The Idea" becomes distorted by people's greed.

News of Members

continued from page 2

electrical impulses from a dancers muscles into music... **Scott Kim**, designer, computer scientist and inventor of Inversions lettering puzzles, has joined Karl Schaffer and Erik Stern in performing original dances about math and physics.... **Guy Marsden**, has just been commissioned to create a reproduction of his interactive neon jukebox, *Dodeca Rockola*, for a shopping mall near Chicago. He has written a series of technical articles for *Maquette*, published by the International Sculpture Center.... Returning to his high school reunion in Ann Arbor, MI, this summer, **Mike Mosher** and his wife, **Chysanthe**, gave a two-hour multimedia performance combining his HyperCard graphics with their original music and spoken word.... A bus tour of interactive art called World of Music and Art featured work by **Lucia Grosberger Morales**. She is in Bolivia to design a graphic CD showing various aspects of an archeological site.

Please send a
**membership
application** and
sample newsletter to
(me)(my friends) at:

NAME _____

ADDRESS _____

☐ Sample issue &
application only (free) ☐ I enclose \$ _____ for membership (see above)

Yearly membership rates:

US Individual \$30
US Institution \$45
US Student or Senior \$20

Canada/Mexico add 5 US\$ to US rates; all
other countries add 15 US\$ to US rates.

Membership includes 12 issues of the *Ylem
Newsletter* & listing in the *Artists Using
Science and Technology Directory* which
you will receive in the Autumn.

Mailing labels of Ylem members

(about 250 artists &
art enthusiasts) are
available to Ylem
members for \$20.
Info: Bev Reiser
510-482-2483
or send \$20 with
your request to
address below.

Ylem is a non-profit, networking organization.

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Trudy Myrrh Reagan (V. P.)
Gary Zellerbach (Treasurer)
Eleanor Kent (Mshp. Chair)
Lucia Grossberger
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Newsletter

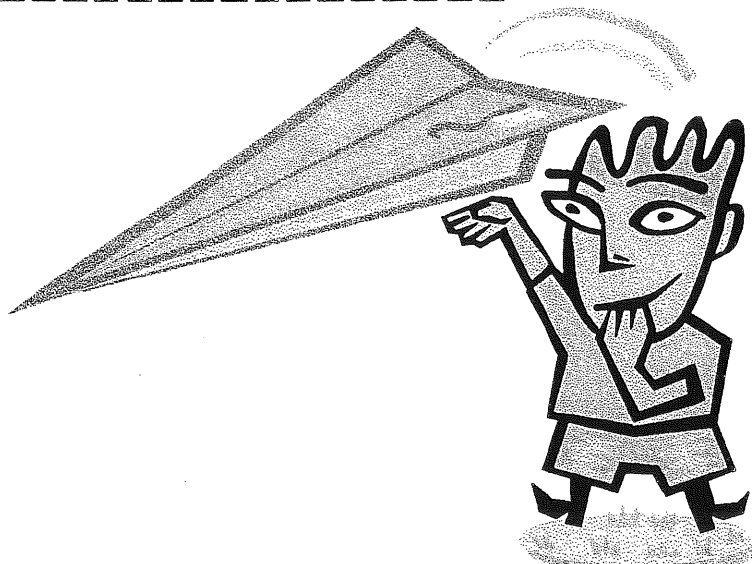
Trudy Myrrh Reagan
Russell Reagan

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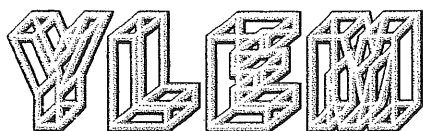
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Computer art by Pamela Hobbs



Artists Using Science and Technology
PO Box 749, Orinda, CA 94563

Use this address for membership info./renewals. See below for newsletter editor/submissions address.

November Newsletter

Contributions are most welcome

The Ylem Newsletter welcomes Ylem members' art
and articles, notices of events, exhibitions, etc. Art
submitted must reproduce well with b&w copy
machine. If you have done art on a Macintosh, you
may send us a disk. Please include title, date
created, medium and phone number. Articles should
be 400-800 words long, preferably on a Mac disk.
Send to **Ylem Editor** (see below).

Ylem's two addresses:

Submissions and notices
for Newsletter, write:

**Ylem Editor, 967 Moreno Ave.
Palo Alto, CA 94303**
Trudy, 415-856-9593
trudymyrrh@aol.com

Membership info., any
other Ylem business, write:

**Ylem (main office)
PO Box 749
Orinda, CA 94563**
beverly@idiom.berkeley.ca.us

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